

LPE Center News



November, 2006

Connecting Experts With Those Advising Producers

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LPE Learning Center Webcast Series

Waterborne Pathogens To Be Discussed During the December Webcast

The second of a two-part webcast series on pathogens will cover how pathogens move in water, managing waterborne pathogen risks in manure application, and alternative waste management technologies for reducing microbial pathogens in animal manure.



Dr. Rob Atwill

The speakers for this seminar include Dr. Jane Frankenberger, Ag Extension Engineer at Purdue University; Dr. Rob Atwill, Veterinarian and Extension Specialist with the University of California Davis; Dr. Chip Simmons, Assistant Research Professor at the University of North Carolina Chapel Hill School of Public Health.



Dr. Jane Frankenberger



Dr. Chip Simmons

Date/Time: Friday, December 15, 2:30 pm Eastern, 1:30 pm Central, 12:30 pm Mountain, and 11:30 am Pacific.

How to Attend: Go to <http://lpe.unl.edu/webcast2.html> for directions.

November 17 Webcast Reminder

“Pathogens in Animal Manure—Should We be Concerned?”

[More information](#)

What’s Going On in the LPE Learning Center?

October Webcast and Power Point Slides Available

The October webcast “Proposed Changes to EPA’s CAFO Regulations” is available for viewing at the LPE Learning Center website. The Power Point slides that accompany the presentation by George Utting, US EPA, have also been posted as a .pdf file. You will need Adobe Acrobat software to open the file. If you do not already have this software, you can [download](#) a free reader. The webcast archive is located at <http://lpe.unl.edu/archive2.html>.

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Coming Soon...

✓ The pathogen issue team will soon be releasing a set of frequently asked questions (FAQs) related to pathogens and livestock. The FAQs were answered and reviewed by experts in the area covered by each question. The FAQs were also reviewed by lay people to ensure that the information is relevant to non-experts. The pathogen team has also assembled a “Best of the Best” list of recommended resources for learning more about pathogens. All of the items on the list are electronically available. The target date for release is the week of November 13, 2006. An announcement will be sent to newsletter subscribers when the resources are posted.

Share This Newsletter

A text version of each article is available at <http://lpe.unl.edu> (click on newsletter) for reprinting in other newsletters, listservs, or other media.

✓ Thanks to webcast viewers who have offered feedback! Due to the large number of requests, we will post the Power Point presentations (whenever possible) for upcoming webcasts at the <http://lpe.unl.edu> home page. They will generally be available sometime in the afternoon on the day before a webcast is scheduled. The presentations will also be available to webcast viewers during the broadcast.

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“Feed Management for CNMP Development” Course Offered

At animal feeding operations, feed represents a large portion of the nutrients imported onto a production facility. Management opportunities exist to reduce the import of nutrients, particularly nitrogen and phosphorus, onto the farm; and to reduce the nutrients excreted in manure.

With the need for development of both Comprehensive Nutrient Management Plans (CNMPs) and US EPA Nutrient Management Plans at animal feeding operations, feed management may be a necessary option for completion and implementation of those plans. This course will not train you to develop the farm’s feed management

plan or to perform the job of an animal nutritionist, but it will help you understand the benefits of feed management and how it can work with a nutrient management plan. It will also provide you with tools and information to use in discussing the possibility of feed management with a producer.

For training course information and registration: <http://www.ucs.iastate.edu/mnet/feedmgmt/home.html>

For more information or questions, contact Lara Moody, Iowa State University (lmooody@iastate.edu, 515-294-7355).

Spotlight On...

The Debate About Animal Diet and Its Effects on E. coli 0157:H7

The recent human outbreak of E. coli 0157:H7 traced to spinach that may have links to livestock manure has reinvigorated a lively debate. There is a persistent and passionate assertion, sometimes repeated in the popular press, that 0157:H7 presence in livestock is due to the “unnatural”, high-grain content in the diet of confined animals. Dale Hancock and Tom Besser of the College of Veterinary Medicine, Washington State University conducted a literature review of research on this topic. A summary of some of the major conclusions drawn from their review includes:

- ✓ Worldwide, many researchers have documented that the prevalence of 0157:H7 in the feces of cattle on pasture or range (grass-fed) is the similar that of confined (grain-fed) cattle of similar age.
- ✓ The assertion that grain diets are the reason why 0157:H7 is found in livestock appears to originate from a research project that looked at E. coli populations as a whole, not at 0157:H7 specifically. Subsequent research has shown that 0157:H7 behaves differently than other E. coli strains.

Another aspect of the debate over this topic is the theory that 0157:H7 organisms in grain-fed animals are more acid-resistant and therefore more likely to survive through the human stomach to the intestine,

where they can cause illness. Some of the points from Dr. Hancock and Dr. Besser’s review:

- ✓ Research has not found differences in the acid resistance of E. coli 0157:H7 populations in the digestive tracts of animals fed hay versus those fed grain.
- ✓ The acid resistance of E. coli 0157:H7 may be less important in determining the pathogen survivability to the human intestine than previously speculated.

Overall, the balance of findings in scientific literature tends to dispute the assertion that cattle diets play a major role in exposure or infectivity of E coli 0157:H7 to humans.

The newsletter editors wish to thank Dr. Hancock and Dr. Besser for allowing us to summarize their review. The complete text of their paper can be found at <http://www.puyallup.wsu.edu/dairy/joeharrison/publications.asp>.



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